FACT SHEET FOR NPDES PERMIT WA-003204-2
BRIGHTWATER WASTEWATER TREATMENT PLANT PROJECT

This fact sheet is a companion document to National Pollutant Discharge Elimination System (NPDES) Permit No. WA-003204-2. This permit is issued to King County's Department of Natural Resources and Parks (DNRP), Wastewater Treatment Division to allow the discharge of stormwater and uncontaminated dewatering water associated with construction activity from the Brightwater wastewater treatment plant construction project to Little Bear Creek and to ground water via an upland area. This fact sheet establishes the basis for requirements which are included in the permit.

GENERAL INFORMATION

Applicant:	King County DNRP, Wastewater Treatment Division 201 S. Jackson St., Suite 503 Seattle, Washington 98104
Site Name and Address:	Brightwater Wastewater Treatment Facility East of SR-9, North of Woodinville Woodinville, WA 98104 Snohomish County
Type of Facility:	Construction Activity
Receiving Water:	(Outfalls 001, 002, 003, 004, 005, and 006) Little Bear Creek (Outfall 007) Ground water via upland discharge area
Water Body ID Number:	(001, 002, 003, 004, 005, and 006) WA-08-1085

TABLE OF CONTENTS

INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System (NPDES) system of permits, which is administered by the Environmental Protection Agency (EPA). EPA has delegated responsibility to administer the NPDES permit program to the State of Washington on the basis of Chapter 90.48 RCW, which defines the Department of Ecology's authority and obligations in administering the Wastewater Discharge Permit Program.

Regulations adopted by the state include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty (30) days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review. Details on the public notice procedures are contained in Appendix A of the fact sheet. Definitions for both the permit and fact sheet are contained in Appendix B of the fact sheet.

The draft permit and fact sheet were reviewed by the Permittee. Errors and omissions identified in this review were corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. Comments, responses, and the resultant changes to the permit and fact sheet will be summarized in Appendix C. Parties that submit comments will receive a copy of the final permit and fact sheet.

BACKGROUND

DESCRIPTION OF THE PROJECT

The Brightwater wastewater treatment plant project site encompasses approximately 114 acres located east of SR-9, northeast of the intersection of SR-9 and SR-522, and north of the city of Woodinville in unincorporated Snohomish County. It is located within portions of Sections 24, 26, and 35, Township 27 North, Range 5 East W.M. The site is comprised of sixteen parcels. The 114-acre site is roughly rectangular in shape. The northern portion of the site (37.3 acres) lies beyond the urban growth area (UGA) and is largely undeveloped and will not be used for construction of treatment facilities. This area will be used for compensatory wetland and stream mitigation. The central and southern portions of the site have been developed for commercial and industrial land uses and will be the location for the wastewater and stormwater facilities. A small portion of the southern end of the site will also be used for stream and wetland mitigation. The treatment plant and stormwater management facilities will occupy about 70 acres.

The Brightwater wastewater treatment plant will treat and disinfect wastewater from King County's North King and South Snohomish service areas. Wastewater treatment will consist of preliminary, primary, and secondary treatment with disinfection and solids handling facilities. Additional facilities include water reuse and noise and odor control units.

The Brightwater WWTP is a multi-phased project planned to be developed over five years. As phases are developed, the stormwater controls will be installed to serve that phase of construction and future phases if the drainage subbasins are crossed.

The planned construction includes:

- North Mitigation Area – Consists of relocating Unnamed Creek and 228th Street Creek and constructing wetland mitigation areas.
- Demolition – Involves demolition of existing structures, pavement, curbing, and underground utilities.
- Upslope Diversions – Consists of constructing two flow diversion pipes for discharge to streams at the northern and southern portions of the site.
- Mass Grading – Approximately 800,000 cubic yards of material will be excavated and possibly 100 percent will be used as fill on the project site.
- Structural Excavations and Facility Construction – This activity includes the excavation of foundations and construction of the treatment plant facilities, including piping, roads, utilities, landscaping, and the permanent stormwater management system.

DESCRIPTION OF THE RECEIVING WATER

The Brightwater WWTP site is located within the 692-square mile Cedar-Sammamish River watershed. This watershed is designated as Water Resource Inventory Area (WRIA) 8, which includes all of the land draining to Lake Washington. Runoff from the project site eventually reaches Lake Washington via Little Bear Creek and the Sammamish River.

Table 1 presents a summary of the receiving water quality characteristics in the Brightwater Wastewater Treatment Plant Project vicinity, including both class-based and use-based classifications according to Ecology's former and revised Surface Water Quality Standards (WAC 173-201A). EPA has not yet approved Ecology's revised use-based surface water quality standards completely. Table 2 includes water quality impairment reflected in the 1998 and draft 2002/2004 303(d) list of impaired and threatened water bodies.

Table 1: Ecology Previous and Revised Water Quality Characteristics of Receiving Waters - Brightwater WWTP Project (Revised WAC 173-201A).

Receiving Water Body	Use Designations (Ecology 2003)	Classification (Ecology 1997)
Lake Washington (secondary)	Salmon and trout spawning, core rearing, and migration; extraordinary primary contact recreation; and all other water supply and miscellaneous uses	Class AA Freshwater (extraordinary)
Sammamish River (secondary)	Salmon and trout spawning, core rearing, and migration; extraordinary primary contact recreation; and all other water supply and miscellaneous uses	Class AA Freshwater (extraordinary)
Little Bear Creek	Salmon and trout spawning, core rearing, and migration; extraordinary primary contact recreation; and all other water supply and miscellaneous uses	Class AA Freshwater (extraordinary)

Table 2. Ecology's 1998 and draft 2002/2004 303(d) list of impaired surface waterbodies - Brightwater WWTP Project (Ecology 1998 and Ecology 2004).

Water Body	Approved 1998 303(d) List (Ecology 1998)	Draft 2002/2004 303(d) List and Associated Pollutants (Category 5 Listings) (Ecology 2004)
Lake Washington	Fecal coliform bacteria	Fecal coliform and ammonia and sediments
Sammamish River	Temperature, pH, fecal coliform bacteria, dissolved oxygen	Dissolved oxygen, temperature and fecal coliform bacteria (water)
Little Bear Creek	Fecal coliform bacteria	Fecal coliform bacteria and dissolved oxygen

Lake Washington
Lake Washington has a drainage area of 472 square miles and a surface area of 21,500 acres. The overall water quality of Lake Washington is good, and the lake is characterized as mesotrophic. Lake Washington is on Ecology's year 2002 303(d) list of water quality impaired waters for fecal coliform bacteria, ammonia, and sediments.

Sammamish River
The Sammamish River is approximately 13.8 miles long and flows north and west from Lake Sammamish before it enters the northeast end of Lake Washington at the city of Kenmore. The Sammamish River is on the year 2002 303(d) list for fecal coliform bacteria, dissolved oxygen, and temperature.

Little Bear Creek
The WWTP site is within the Little Bear Creek basin. Little Bear Creek is about 7.4 miles long, drains a basin of 15 square miles, and is a tributary to the Sammamish River. Little Bear Creek flows parallel to the west side of the site and is separated from the site by SR-9. Little Bear Creek is listed on the year 2002 303(d) list for fecal coliform bacteria at four locations throughout the length of the creek and dissolved oxygen at one location near the mouth of the creek.

Little Bear Creek is designated as Class AA receiving waters. Potential characteristic uses of Class AA waters include the following:

> water supply (domestic, industrial, agricultural); stock watering; fish migration; fish and shellfish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation.

DESCRIPTION OF DISCHARGE

Stormwater runoff from the Brightwater WWTP project will discharge at seven identified locations (Outfalls 001-007). Outfalls 001, 002, 003, 004, 005, and 006 discharge to Little Bear Creek. Outfall 007 will discharge to ground water via the soil at the northern portion of the site. Please see Appendix D regarding the outfall locations. Storm water from the project will be routed to stormwater ponds for treatment and flow control prior to discharge to Little Bear Creek. Outfall 007 will discharge storm water to an upland infiltration area. On-site wetlands and creeks receiving the discharges are considered to be waters of the state, and the Permittee is required to meet applicable surface water quality standards.

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in an NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Discharges of stormwater must meet all applicable provisions of Sections 301 and 402 of the Clean Water Act (CWA). These provisions require control of pollutant discharges to a level equivalent to Best Available Technology Economically Achievable (BAT) for toxic and unconventional pollutants, and Best Conventional Pollutant Control Technology (BCT) for conventional pollutants, and any more stringent limitations necessary to meet water quality standards. In addition, state law requires discharges to apply all known available and reasonable methods of prevention and treatment (AKART) to prevent and control the pollution of the waters of the state of Washington. State law also requires any other more stringent limitations necessary to meet all applicable state standards.

The sand and gravel industry is engaged in significant land disturbing activities, such as earth movement, excavation, mining, and washing and sorting of aggregate. In 1994, a new Sand and Gravel General Permit was developed by Ecology in which a discharge limit of 50 NTU for turbidity, via conventional sedimentation, was established. Over the last nine years this similar source category has demonstrated the 50 NTU limit to be achievable.

In 1998, Ecology first issued an Individual Construction Stormwater Permit which was based on the general permit but also required discharge monitoring. A review of available data from eight individual construction stormwater permitted facilities showed that less than 10 percent of the discharge data failed to meet 50 NTU. Therefore, a technology-based effluent limitation for turbidity of 50 NTU, for conventional sedimentation, is being established for this permit.

If the Permittee has difficulty meeting the technology-based limit for turbidity of 50 NTU or the water quality-based limit through conventional sedimentation, then the Permittee may elect to use enhanced treatment (i.e. chemical treatment or sand filtration) to meet these limits or discharge to ground water via on-site soil infiltration beds or surface soils at the upland discharge area.

For chemical treatment, a study conducted by Minton and Benedict for the City of Redmond concluded that effluent turbidities of 5 NTU and lower are achievable. An AKART determination by the Department of Ecology has resulted in a 5 NTU limit for chemical treatment. As a result, the Port of Seattle's Sea-Tac individual construction stormwater NPDES currently has a 5 NTU limit for turbidity when chemical treatment systems are employed.

The permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) which includes Best Management Practices (BMPs) to prevent the pollution of stormwater and to reduce the amount of pollutants discharged. Development of an adequate SWPPP and full implementation of BMPs constitutes implementation of BAT, BCT, and AKART.

The Permittee is required to use the Department of Ecology's August 2001 Stormwater Management Manual for Western Washington (SWMM), or an equivalent manual, to make a judgment of which BMPs are necessary to achieve compliance with the BAT and BCT requirements of the CWA, as well as the AKART requirements of state law. The SWPPP must include a description of stabilization and structural practices to be used at the site to minimize erosion and the movement of sediments on and from the site. The SWPPP will be submitted to the Department for review.

The discharge of process waste water, domestic waste water, or noncontact cooling water to a storm drain or surface waters is prohibited. Illicit discharges are not authorized, including spills of oil or hazardous substances, and obligations under state and federal laws and regulations pertaining to those discharges apply.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such as the discharge will meet established surface water quality standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the State of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. Numerical criteria set forth in the water quality standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA, 1992). These criteria are designed to protect humans from cancer and other diseases and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic waters uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The State of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall be protected. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

When the construction site is not in compliance with these standards, the Permittee shall take immediate action(s) to achieve compliance by implementing additional BMPs and/or improved maintenance of existing BMPs.

MIXING ZONES

The water quality standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones

can only be authorized for discharges that are receiving all known available and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100. The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

A mixing zone has not been specified nor established in the permit.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA, 1992). Pollutants that might be expected in the discharge from construction activity are: turbidity, pH, and petroleum products. The water quality standards for turbidity and pH for Class AA waters are:

Turbidity: shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.

pH: shall be within the range of 6.5 to 8.5 (freshwater) or 7.0 to 8.5 (marine water) with a human-caused variation within a range of less than 0.2 units.

Although there is no specific water quality standard for petroleum products, the hazardous waste rules under RCW 90.56 have been interpreted under RCW 90.48 to disallow visible sheen.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the BMPs are functioning correctly and that the water quality criteria are not being violated in the receiving water.

Erosion potential and discharge of pollutants from construction sites is more closely correlated to rainfall intensity than the amount of rain in a 24-hour period. Light rain throughout a 24-hour period does not generate the pollution potential of a short duration high intensity storm event. The Industrial Stormwater General Permit, issued in August 2002, established monitoring requirements that set a storm event trigger of "greater than 0.1 inches in a 24-hour period." The Washington State Department of Transportation has recognized the limitations of only monitoring 0.5-inch storm events and now more commonly uses 0.25 in their monitoring plans. The 0.5-inch rain event trigger that has been used over the past 4 or 5 years has proven to be inadequate to determine water quality compliance for short duration/high intensity storm events.

A storm event monitoring trigger of 0.25 inches will allow for better compliance determinations and therefore this permit establishes a monitoring trigger for all storm events greater than or equal to 0.25 inches in a 24-hour period.

The Department is well experienced with finding points of compliance with the state turbidity standard. The Department has successfully established point of compliance for turbidity at Redmond Ridge UPD, Skagit Highlands, and Sound Transit. Also, five companion orders to the Stormwater Construction General permit and the Sand and Gravel General permit successfully established points of compliance with the 5 NTU over background standard for turbidity.

The Department will establish the point of compliance in the receiving water through the review and approval of the Construction Stormwater/Dewatering Monitoring Plan required in Special Condition S3.A.

Little Bear Creek and the Sammamish River are listed on the 2002 year 303(d) list for dissolved oxygen. Ground water is typically low in dissolved oxygen. In order to ensure that the dewatering waters do not cause dissolved oxygen problems in the receiving water, dissolved oxygen in the dewatering water will be monitored. Information provided by King County indicates that Little Bear Creek has occasional problems with temperature. In order to verify that the stormwater is not exacerbating temperature effects in Little Bear Creek, temperature monitoring from the stormwater discharge will be required during the critical period of July 1 –September 30. In the past, Lake Washington has experienced algae problems associated with nutrients such as phosphorus. To prevent such nuisance conditions, phosphorus will be monitored at the discharge point to the receiving water.

Phase I and Phase II Environmental Site Assessments (ESA) have been conducted on most of the sixteen (16) parcels that comprise the Brightwater WWTP site. Property access issues have limited the County's ability to conduct the Phase II ESAs on Parcels 1, 3C, and 12. For Parcel 6, the Phase II ESA indicated that one sample exceeded the Model Toxics Cleanup Action soil cleanup levels of 2,000 mg/kg (diesel range hydrocarbons) and 2,000 mg/kg (motor oil). Sample R9-TP01-C-8 exhibited diesel range hydrocarbons and motor oil at levels of 3,900 mg/kg and 12,000 mg/kg, respectively. Approximately 2 cubic yards of soil is scheduled for remediation by the current owner prior to County acquisition. In regard to Parcel 10, one sample (R9-TP04-D-11) slightly exceeded the MTCA soil cleanup criteria for arsenic and five semi-volatile organic compounds. Confirmation of the cleanup of this parcel will be conducted by the County. The MTCA soil cleanup levels are less stringent than the Washington State groundwater and surface water quality standards. In light of the fact that the Phase II ESA has not been conducted on three of the parcels and to ensure that soil cleanup efforts are also protective of surface water and groundwater quality, additional monitoring for metals, volatile organic compounds, polynuclear aromatic hydrocarbons, and polychlorinated biphenyls (PCBs) will be required for stormwater and dewatering waters.

Measures shall be taken to prevent the introduction of process water or wastewater into stormwater and measures to verify that process water and wastewater discharges do not enter the stormwater treatment system. In order to avoid hydraulically overloading the stormwater treatment systems, clean, non-turbid, uncontaminated groundwater dewatering waters shall not be conveyed to the stormwater treatment systems. Standing sump water and other turbid water shall be conveyed and treated separately from any clean groundwater dewatering waters. Sump water and other turbid waters shall be conveyed to a sediment pond for treatment, or if they meet the effluent limitations, can be conveyed to the upland discharge area for discharge to groundwater via soil. If on-site infiltration basins are used, the soil suitability shall be ascertained, via a geotechnical study, to verify the adequacy of the soils to accept the turbid stormwater.

The Permittee is required to submit a Construction Stormwater/Dewatering Monitoring Plan by March 1, 2005, with annual updates on or before October 1st of each year. The purpose of the monitoring plan is to assess compliance with the water quality standards in each water body that will receive stormwater discharge during the following year.

LAB ACCREDITATION

Laboratories used to prepare monitoring data shall be registered or accredited under the provisions of *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. Turbidity and pH may be measured in the field with properly calibrated meters.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S4 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

STORMWATER POLLUTION PREVENTION PLAN FOR CONSTRUCTION ACTIVITIES

Special Condition S6 requires a SWPPP for construction activity, including construction dewatering, to be prepared and implemented prior to the commencement of construction activity. The objectives of a SWPPP for construction activities are: 1) Implement BMPs to minimize erosion and sediments from rainfall runoff at construction sites, and to identify, reduce, eliminate, or prevent the pollution of stormwater; 2) Prevent violations of surface water quality, ground water quality, or sediment management standards; 3) Prevent, during the construction phase, adverse water quality impacts including impacts on beneficial uses of receiving water by controlling peak rates and volumes of stormwater at the Permittee's outfalls and downstream of outfalls; and 4) Eliminate the discharges of unpermitted process wastewater, domestic wastewater, illicit discharges, and noncontact cooling water to stormwater drainage systems and waters of the state.

Annual revisions to the Master SWPPP are required and site-specific information on each of the four major phases of construction must be completed by the County for review and approval by Ecology prior to commencement of the phased-work.

A Spill Prevention and Emergency Cleanup Plan shall be included as a section in the *SWPPP*. BMP S1.80 in Volume IV of Ecology's *Stormwater Management Manual* (*SWMM*) shall be used for guidance in developing this plan.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending, or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 prohibits the Permittee from using the permit as a basis for violating any laws, statutes, or regulations. Conditions G6 and G7 relate to permit renewal and transfer. Condition G8 prohibits the reintroduction of removed substances back into the effluent. Condition G9 states that the Department will modify or revoke and reissue the permit to conform to more stringent toxic effluent standards or prohibitions. Condition G10 incorporates by reference all other requirements of 40 CFR 122.41 and 122.42. Condition G11 notifies the Permittee that additional monitoring requirements may be established by the Department. Condition G12 requires the payment of permit fees. Condition G13 describes the penalties for violating permit conditions. Condition G14 states that the permit does not convey any property rights or any exclusive privilege. Condition G15 requires compliance with all conditions of this permit. Condition G16 requires compliance with effluent standards for toxic pollutants. G17 provides under the Clean Water Act that any person who falsifies, tampers with or knowingly renders inaccurate any monitoring device is subject to penalties and/or imprisonment. Condition G18 requires the Permittee to give prior notice to the Department of planned changes to facility production or processes. Condition G19 establishes the requirement to provide advance notification to the Department of anticipated noncompliance. Condition G20 requires the submittal of any relevant facts determined to have been omitted in original permit application. Condition G21 establishes compliance schedule reporting.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet water quality standards for surface waters, sediment quality standards, or water quality standards for ground waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations. The permit may be modified, in the future, if additional studies, investigations, or information warrant modification of the terms or conditions of the permit.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

King County

2004. Attachments for the Master Stormwater Pollution Prevention Plan for the Brightwater Wastewater Treatment Plant

2003. Final Environmental Impact Statement, Volume 7.

Minton, G.R., and A. Benedict

1999. Stormwater Treatment. "Polymer-assisted clarification of stormwater from construction sites, Resource Planning Associates, for the City of Redmond, Washington."

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109.

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has determined to issue an individual construction stormwater NPDES permit to King County DNRP for the Brightwater WWTP construction project. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on June 22, 2004, and June 29, 2004, in the *Seattle Times* and the *Everett Herald* to inform the public that an application had been submitted and to invite comment on the issuance of this permit.

The Department published a Public Notice of Draft (PNOD) on September 10, 2004, in the *Seattle Times* and the *Everett Herald* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments were mailed to:

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452
Tmil461@ecy.wa.gov

Any interested party was allowed to comment on the draft permit or request a public hearing on the draft permit within the thirty (30)-day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department received requests for a public hearing but decided to not hold a public hearing since the reasons for a hearing were not applicable to the terms and conditions of the permit and fact sheet.

The Department considered all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is included in Appendix E of this fact sheet and Ecology's responses were mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (425) 649-7103, or by writing to the address listed above.

This permit and fact sheet was written by Mark C. Henley, P.E.

APPENDIX B—DEFINITIONS

Best Management Practices (BMPs - general definition) means schedules of activities; prohibitions of practices; maintenance procedures; and other physical, structural, and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks; sludge or waste disposal; or drainage from raw material storage. In this permit, BMPs are further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

Bypass means the diversion of waste streams from any portion of a treatment facility.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; USC 1251 et seq.

Combined Sewer means a sewer which has been designed to serve as a sanitary sewer and a storm sewer, and into which inflow is allowed by local ordinance.

Constructed Wetland means wetlands intentionally created, on sites that are not natural wetlands, for the primary purpose of wastewater or stormwater treatment and managed as such. Constructed wetlands are normally considered as part of the stormwater collection and treatment system.

Construction Activity means clearing, grading, excavation, and any other activity which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Construction Dewatering means the act of pumping ground water or stormwater away from an active construction site.

Detention means the temporary storage of stormwater to improve quality and/or to reduce the mass flow rate of discharge.

Director means the Director of the Washington State Department of Ecology or his/her authorized representative.

Discharger means an owner or operator of any facility or activity subject to regulation under Chapter 90.48 RCW or the Federal Clean Water Act.

Domestic Wastewater means water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such ground water infiltration or surface waters as may be present.

Ecology means the Washington State Department of *Ecology*.

Equivalent BMPs means operational, source control, treatment, or innovative BMPs which result in equal or better quality of stormwater discharge to surface water or to ground water than BMPs selected from the *SWMM*.

Equivalent Stormwater Management Manual means a manual that has been deemed by Ecology as being equivalent to the *SWMM*.

Erosion means the wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep.

Erosion and Sediment Control BMPs means BMPs that are intended to prevent erosion and sedimentation, such as preserving natural vegetation, seeding, mulching and matting, plastic covering, filter fences, and sediment traps and ponds. Erosion and sediment control BMPs are synonymous with stabilization and structural BMPs.

Erosion and Sediment Control Plan means a document which describes the potential for erosion and sedimentation problems, and explains and illustrates the measures which are to be taken to control those problems.

Final Stabilization means the completion of all soil disturbing activities at the site and the establishment of a permanent vegetative cover, or equivalent permanent stabilization measures (such as riprap, gabions or geotextiles) which will prevent erosion.

"*40 CFR*" means Title 40 of the Code of Federal Regulations, which is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the federal government.

Ground Water means water in a saturated zone or stratum beneath the land surface or a surface water body.

Illicit discharge means any discharge that is not composed entirely of stormwater except discharges pursuant to an NPDES permit and discharges resulting from fire fighting activities.

Leachate means water or other liquid that has percolated through raw material, product or waste and contains substances in solution or suspension as a result of the contact with these materials.

Local Government means any county, city, or town having its own government for local affairs.

Municipality means a political unit such as a city, town or county; incorporated for local self-government.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking, and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the state from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington Department of Ecology.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure and container from which pollutants are or may be discharged to surface waters of the state. This term does not include return flows from irrigated agriculture. (See Fact Sheet for further explanation.)

Pollutant means the discharge of any of the following to waters of the state: dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, domestic sewage sludge (biosolids), munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste. This term does not include sewage from vessels within the meaning of Section 312 of the FWPCA, nor does it include dredged or fill material discharged in accordance with a permit issued under Section 404 of the FWPCA.

Pollution means contamination or other alteration of the physical, chemical, or biological properties of waters of the state; including change in temperature, taste, color, turbidity, or odor of the waters; or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the state as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare; or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish or other aquatic life.

Process Wastewater means any water which, during manufacturing or processing, comes into direct contact or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Puget Sound Basin means the Puget Sound south of Admiralty Inlet (including Hood Canal and Saratoga Passage); the waters north to the Canadian border, including portions of the Strait of Georgia; the Strait of Juan de Fuca south of the Canadian border; and all the lands draining into these waters as mapped in Water Resources Inventory Areas numbers 1 through 19, set forth in WAC 173-500-040.

Sanitary Sewer means a sewer which is designed to convey domestic wastewater.

Sediment means the fragmented material that originates from the weathering and erosion of rocks or unconsolidated deposits, and is transported by, suspended in, or deposited by water.

Sedimentation means the depositing or formation of sediment.

SEPA (State Environmental Policy Act) means the Washington State Law, RCW 43.21C.020, intended to prevent or eliminate damage to the environment.

Severe Property Damage means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Significant Amount means an amount of a pollutant in a discharge that is amenable to available and reasonable methods of prevention or treatment; or an amount of a pollutant that has a reasonable potential to cause a violation of surface or ground water quality or sediment management standards.

Significant Contributor of Pollutant(s) means a facility determined by Ecology to be a contributor of a significant amount(s) of a pollutant(s) to waters of the state of Washington.

Significant Materials include, but are not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges.

Site means the land or water area where any "facility or activity" is physically located or conducted.

Source Control BMPs means physical, structural, or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. A few examples of source control BMPs are erosion control practices, maintenance of stormwater facilities, constructing roofs over storage and working areas, and directing wash water and similar discharges to the sanitary sewer or a dead end sump.

Stabilization means the application of appropriate BMPs to prevent the erosion of soils, such as temporary and permanent seeding, vegetative covers, mulching and matting, plastic covering and sodding. See also the definition of Erosion and Sediment Control BMPs.

Storm Sewer means a sewer that is designed to carry stormwater. Also called a storm drain.

Stormwater means rainfall and snow melt runoff.

Stormwater Drainage System means constructed and natural features which function together as a system to collect, convey, channel, hold, inhibit, retain, detain, infiltrate, or divert stormwater.

Stormwater Management Manual for the Puget Sound Basin (SWMM) or Manual means the technical manual prepared by Ecology for use by local governments and published in 1992, or statewide revisions when they become available, that contain descriptions of and design criteria for BMPs to prevent, control, or treat pollutants in stormwater.

Stormwater Pollution Prevention Plan (SWPPP) means a documented plan to implement measures to identify, prevent, and control the contamination of point source discharges of stormwater.

Surface Waters of the State include lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Treatment BMPs means BMPs that are intended to remove pollutants from stormwater. A few examples of treatment BMPs are detention ponds, oil/water separators, biofiltration, and constructed wetlands.

USEPA means the United States Environmental Protection Agency.

Water Quality means the chemical, physical, and biological characteristics of water, usually with respect to its suitability for a particular purpose.

Waters of the State includes those waters as defined as "waters of the United States" in *40 CFR* Subpart 122.2 within the geographic boundaries of Washington State and "waters of the state" as defined in Chapter 90.48 RCW which include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Acronyms

BMP	Best Management Practice
CERCLA	Comprehensive Environmental Response Compensation & Liability Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
EPA	Environmental Protection Agency
ESC	Erosion and Sediment Control
FWPCA	Federal Water Pollution Control Act
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SWMM	Stormwater Management Manual for the Puget Sound Basin
SWPPP	Stormwater Pollution Prevention Plan
USC	United States Code
USEPA	United States Environmental Protection Agency
WAC	Washington Administrative Code
WQ	Water Quality

APPENDIX C — PRIORITY POLLUTANTS LIST (APPLICABLE TO PERMIT)

(Source: 40 CFR Pt. 423, titled "Appendix A to Part 403 - 126 Priority Pollutants")

Volatile Organic Compounds

Chlorobenzene
Chloroethane
1,2-dichloroethane
1,1,1-trichloroethane
1,1,2,2-tetrachloroethane
Chloroform (trichloromethane)
Carbon tetrachloride (tetrachloromethane)
2-chloroethyl vinyl ether (mixed)
1,1-dichlorethylene
1,2-trans-dichloroethylene
1,2-dichloropropane
1,2-dichloropropylene (1,3-dichloropropene)
Tetrachloroethylene
Trichloroethylene
Vinyl chloride (chloroethylene)
Methylene chloride (dichloromethane)
Methyl chloride (chloromethane)
Methyl bromide (bromomethane)
Bromoform (tribromomethane)
Dichlorobromomethane
Chlorodibromomethane
Acrolein
Acrylonitrile
Benzene

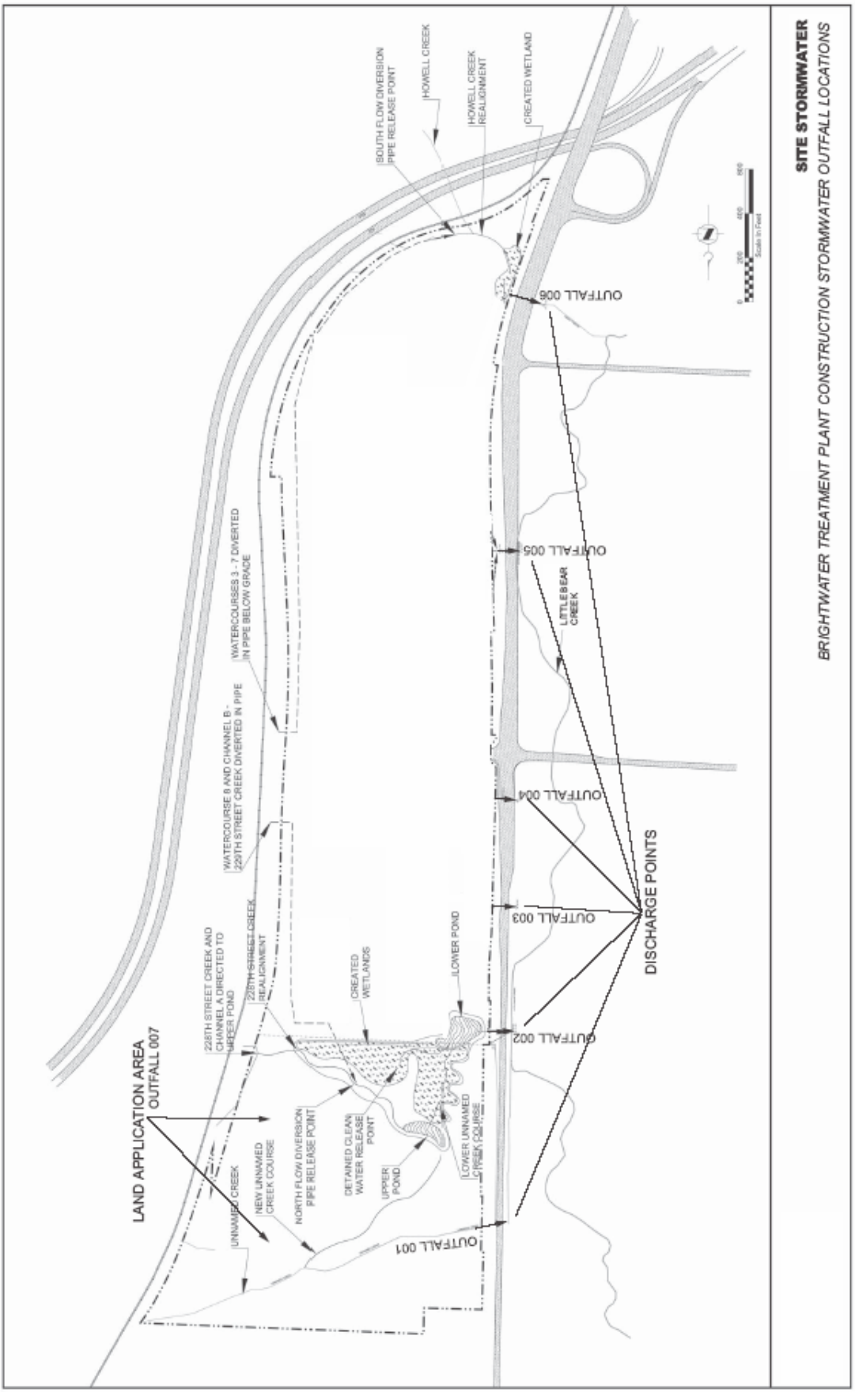
Polynuclear Aromatic Hydrocarbons (PAHs)

Acenaphthene
1,2-benzanthracene (benzo(a)anthracene)
Benzo(a)pyrene (3,4-benzo-pyrene)
3,4-benzofluoranthene (benzo(b)fluoranthene)
11,12-benzofluoranthene (benzo(k)fluoranthene)
Chrysene
Acenaphthylene
Anthracene
1,12-benzoperylene (benzo(ghi)perylene)
Fluorene
Fluoranthene
Phenanthrene
1,2,5,6-dibenzanthracene
(dibenzo(a,h)anthracene)
Indeno (1,2,3-cd) pyrene (2,3-o-phenylene pyrene)
Pyrene

Polychlorinated Biphenyls (PCBs)
PCB-1242 (Aroclor 1242)
PCB-1254 (Aroclor 1254)
PCB-1221 (Aroclor 1221)
PCB-1232 (Aroclor 1232)
PCB-1248 (Aroclor 1248)
PCB-1260 (Aroclor 1260)
PCB-1016 (Aroclor 1016)

Metals
Antimony
Arsenic
Beryllium
Cadmium
Chromium (III)
Chromium (VI)
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc

APPENDIX D—CONSTRUCTION STORMWATER OUTFALL LOCATIONS



APPENDIX E—RESPONSIVENESS SUMMARY

Introduction

The Department of Ecology has issued National Pollutant Discharge Elimination System (NPDES) Permit No. WA-003204-2 to the King County Department of Natural Resources and Parks, Wastewater Treatment Plant Division for discharge of construction stormwater and uncontaminated dewatering waters to State Waters from the Brightwater Route 9 site.

Public Notice of Application (PNOA) was published on June 22, 2004, and June 29, 2004, in the *Seattle Times* and the *Everett Herald* to inform the public that an application had been submitted and to invite comment on the permit process.

The Department published a Public Notice of Draft (PNOD) on September 10, 2004, in the *Seattle Times* and the *Everett Herald* to inform the public that a draft permit and fact sheet were available for review and comment. Based on a request from a citizen, the 30-day public comment period for the construction stormwater NPDES permit was extended an additional 10 business days. In addition to paid legal advertisements in the above-named newspapers, electronic notices (via e-mail) were sent on September 10, 2004, to local daily and weekly newspapers to notify editors/reporters that the Department was seeking public comment on our draft permits. The newspapers receiving the electronic notices included the *Woodinville Weekly*, *North Shore Citizen*, *Seattle PI* (Snohomish Bureau), *Seattle Times* (Snohomish Bureau), *Journal of Commerce*, *Everett Herald* and *Enterprise Chain*, and *Edmonds Beacon*. The public comment period for the construction stormwater NPDES permit ended on October 22, 2004.

As a result of comments, the draft permit was reexamined and some revisions were made to the permit and fact sheet. This Responsiveness Summary is intended to reflect substantive comments on the proposed permit raised during the public comment period and to state the Department of Ecology's response to those comments. Numerous e-mail comments were received during the public comment period (September 10, 2004, to October 22, 2004) and Ecology responded directly to individual e-mail comments. These e-mail comments and responses have not been attached to this Responsiveness Summary in order to conserve paper and mailing costs and in keeping with Washington State's sustainability goals. The e-mails received and responded to during the comment period can be found under the link: http://www.ecy.wa.gov/programs/wq/permits/northwest_permits.html

For comments that were made during the public comment period but were not responded to individually during the comment period timeframe due to time constraints, these comments and Ecology's responses are provided below.

Responses to Comments on the Draft Permits

Comment #1
"I did see page 21, #3 and was concerned that this was subjective and as 20, #3 is prior to excavation or monitors surface and groundwater (result not cause), it does not address my concern.

"Exhibit a sheen or unusual odor" are subjective terms and hard for a front end loader driver to evaluate or be held accountable against. Would not a comprehensive soil sampling process at each point in excavation be more appropriate? Monitor cause and not effect."

Response #1
The above comment refers to the issue of possible environmental contamination from past historical practices at the Route 9 site. During the development of the draft permit, 14 of the 16 parcels had undergone environmental site assessments. At the time of drafting the permit, two environmental site assessments still needed to be performed and will be conducted prior to construction. Page 20, #3 of the permit states, "Prior to the start of construction, the Permittee shall submit a report to Ecology verifying that the remedial activities, based on the Phase I and Phase II environmental site assessments, have been completed and that the cleanup efforts meet the MTCA soil cleanup standards. The Permittee shall further verify that the cleanup activities are also protective of surface and groundwater quality by monitoring surface and ground water via the monitoring schedule described in Section S3, Tables C.1 and C.2 of this permit." The monitoring schedule includes sampling stormwater and dewatering waters for priority pollutant metals, volatile organic compounds, polynuclear aromatic hydrocarbons, and polychlorinated biphenyls as a further safeguard. Please see the Monitoring Schedule on page 9 of the permit. A list of the metals, volatile organic compounds, polynuclear aromatic hydrocarbons, and polychlorinated biphenyls is included in Appendix C (page 19) of the fact sheet.

To address possible soil contamination during excavation activities, Page 21, #3 of the permit, "During excavation activities, if excavated soils exhibit a sheen or unusual odor, indicative of possible soil contamination, the excavation activity will be immediately halted and the soil tested. If the testing confirms the presence of contaminated soils, then these soils will be disposed of in accordance with Ecology's standards." We do not believe that comprehensive soil sampling at each point in excavation is reasonable considering that Phase I and Phase II environmental site assessments have been conducted on the parcels. Phase II assessments have already included soil sampling and testing specific to areas suspected of contamination. The environmental site assessments have indicated that on-site contamination is limited in nature and extent.

Comment #2
"I have some specific comments regarding the Brightwater draft permits:

- In Section S3 A & B - will the public have access to the Construction Stormwater/Dewatering Monitoring Plan and the Annual Documentation of Soil Stabilization?

- In Section S3 C 11 - Why does the monitoring schedule presume that if there aren't any water quality criteria exceedances after the 2nd year that none will occur after that and those compounds should be eliminated from further monitoring?

My following comments are more generalized:

I took the following from the Department of Ecology website:

***Mission** • Protect and Restore Washington's Waters*
***Environmental Goals** • Prevent water pollution including aquatic habitat loss, and ensure adequate water quality and quantity to meet beneficial uses.*

I am baffled how simply issuing permitted discharge amounts and not providing any level of oversight and analysis, in terms of how the permittee actually achieves that, meets the mission to protect *waters or the goal to* prevent *water pollution. It seems much more reactive rather than proactive.*

I would like to see the DOE provide greater specificity in the permits to evaluate how *the permittee can comply with the discharge criteria for Little Bear Creek and not threaten the quantity and quality of the Cross Valley Aquifer for the thousands of residents that are dependent on that supply."*

Response #2
The Construction Stormwater/Dewatering Monitoring Plan and the Annual Documentation of Soil Stabilization is available to all interested parties through Ecology's Public Disclosure Coordinator. Please contact Sally Perkins @ 425-649-7190 or sper461@ecy.wa.gov.

The Phase I and II activities indicated that on-site contamination is limited in extent and that remedial activities have been conducted to cleanup the contamination. Ecology has taken a prudent approach of monitoring priority pollutants from stormwater runoff and dewatering waters as a safeguard to ensure that water quality is protected. These pollutants are not normally monitored for in construction stormwater permits. Ecology believes that a minimum of two years of monitoring represents a reasonable timeframe and approach for these parameters.

Per Section S2 of the permit, the Permittee must comply with the Washington State Surface Water Quality Standards and Groundwater Standards. The Permit requires that a Stormwater Pollution Prevention Plan (SWPPP) be submitted to Ecology prior to the start of construction and annually thereafter for Ecology's review and approval. The SWPPP includes information on how the Permittee will achieve compliance.

Ecology Note on the Following Comment #3
A number of comments were made in a single e-mail, noted as #3. Ecology has separated these comments (i.e. Comment 3a, Comment 3b, Comment 3c, etc…) to provide a more manageable and understandable response.

Comment #3a
"I am very concerned about the groundwater withdrawal from the SR 9 site and the tunneling in the vicinity. One of the King County (KC) bore sites at 233rd Pl. SE, never did stop leaking, even after they dumped bags of concrete down the borehole. They had hit pressurized water at two places in this one bore and then they removed the bore from their final records so that no one would question it. Enough of the local residents in the area travel through this area and take note of what happens and this was one site where we took very close note, including having Cross Valley come and observe the water flowing along the roadway towards Little Bear Creek (LBC). My question is, Why doesn't KC need to have a water right to remove as much water as they probably will be daily? I have heard that as they won't be using any of the water, they don't need this. I have heard that because they won't have benefits from the water withdrawal they won't need this. They do benefit as their buildings won't have as much water to float on. KC as does DOE, that LBC will benefit from having cool water disposed directly into it. LBC may benefit better by having groundwater seep at a slower rate into it than having it dumped all at once, even during a large rain event.

Response #3a
It is not illegal for an entity to drill a geotechnical boring into a flowing artesian aquifer, nor is it illegal for them to seal a flowing artesian well with concrete (they probably used cement or a cement/bentonite slurry). There are requirements within chapter 173-160 WAC for construction and decommissioning of all borings. There is no evidence that the driller's actions did not comply with the requirements.

Since no beneficial use of water occurs, Ecology does not require water right permits for construction dewatering. The water code (RCW 90.03.250) states, "Any person, municipal corporation, firm, irrigation district, association, corporation or water users' association, hereafter desiring to appropriate water for a beneficial use shall make an application to the department for a permit to make such appropriation…" The disposal of water into an existing stream is not considered a beneficial use, and the removal of water to aid in construction also is not considered a beneficial use. The water itself must be used beneficially to require a permit. The County's intent is to remove groundwater via subsurface drains as to not harm the unit process structures and to remove water during construction to facilitate construction. Their intent is to move the water away from the project area and to dispose of the water so as to not conflict with construction activities and long-term activities. Their intent is not to pump groundwater to benefit Little Bear Creek but rather to aid construction and prevent damage to constructed tanks and structures. As a side consequence, the disposal of this cool, clean water will help Little Bear Creek during the summer months.

Comment #3b
I am also very concerned that during summer months, water will be filtered in pools of varying depths. These pools are in the heat of the day and it is probable that the water being released will be warmer than permissible under state law. Thermal pollution causes as many problems in small water systems as do common pollutants. What measures will be undertaken to avoid thermal pollution? At this time in the process, the site layout and technical designs are not public, so being able to process this information is difficult. Do you have the new designs as the public has not been permitted to review so that our comments could be more refined and better used? This is part of the problem when early submission by a jurisdiction creates difficulties when planning is incomplete.

Response #3b
Surface water contained in the detention ponds will warm to higher temperatures during the summer months than during the wet season; however, less detention pond water will be discharged to Little Bear Creek (LBC) during this period relative to the higher precipitation and stormwater runoff months of the winter when detention pond water temperatures will be closer to those of LBC. In addition, it is anticipated that the majority of flow to Little Bear Creek during summer months will be from dewatering waters during the construction period and from the structure underdrains after construction is complete. This groundwater will undergo aeration prior to discharge to increase the amount of dissolved oxygen and will be cooler than surface water temperatures in LBC. The discharge of the cool groundwater to LBC will compensate for warmer waters in the detention ponds. Ecology notes that temperature of the stormwater will be monitored during the months of July through September, per Monitoring Schedule C.1.

Comment #3c
I am also very concerned regarding the quantity of groundwater and surface water that will be discharged from this project. In a real world where there is no development, runoff is very slight. Most rain permeates the soils and becomes slow moving springs to watersheds and streams such as LBC. However, this is no longer the case. Now both groundwater and surface water runoff will be jointly combined to enter into LBC above what would normally enter in a natural state. Of course this natural movement through groundwater would release to LBC much cleaner water than bringing up removing the dirt and putting it back into the system. This also questions whether contaminants in the air may migrate into the storm detention system undetected and add to the pollutant levels already within the creek. Why are the surface and groundwater discharges not being looked at in totality? Is

this DOE's idea of appropriate instream flows (WAC 173-508-020)? Are the benefits as discussed by KC appropriate (WAC 173-500-020)? Will the measures being provided by KC reduce deposition of compounds at their release points in LBC? This is particularly important in the fact that fail safes, do fail and LBC is the closest basin to the plant.

Response #3c

Ecology notes that all water removed from the ground and water collected by stormwater facilities will remain in the basin and be either infiltrated or released into Little Bear Creek. Per the permit, clean, aerated, dewatering water will not be allowed to enter the stormwater treatment system so as to not hydraulically overload the treatment system. Existing groundwater flow that currently provides natural baseflow to LBC will continue to provide natural baseflow (via infiltration or surface discharge) to LBC with the same water quality after the dewatering project as before the project. However, the water discharged to LBC from both the dewatering activities, as well as stormwater runoff water from the detention ponds, has potential to impact the water quality of LBC. To prevent contamination to LBC, the permit issued by Ecology contains effluent limits for pertinent contaminants as well as a monitoring program to assure compliance is met with both state ground water and surface water standards. Compliance is assured by the requirement in the permit to take samples and test for pertinent analytes prior to discharging to LBC. In regard to water quantity effects, the issue of groundwater discharge to LBC was discussed with the Washington State Department of Fish & Wildlife and their staff did not express concern with the level of groundwater discharges on the order of 1 cfs to LBC that are expected during the project.

Comment #3d
Will there be public notice and hearing under section 401 for KC's FWPCA?

Response #3d
This comment is out of scope for this permit. Public notice of the application for permit for both the Section 404 permit issued by the U.S. Army Corps of Engineers (Corps) and the Section 401 Water Quality Certification issued by Ecology was circulated by the Corps. The public notice was issued on May 24, 2004, with a comment period of 30 days, until June 24, 2004. Ecology did not receive any comments regarding the 401 Water Quality Certification application. No request for a public hearing has been received by Ecology for the 401. The Corps' project manager, Jim Green [(206) 764-3495 Corps regulatory section] would have information regarding whether the Corps received any comments or requests for public hearing.
http://www.nws.usace.army.mil/publicmenu/DOCUMENTS/200201289.pdf is the link to the on-line public notice.

Comment #3e
Will DOE approve this application regardless if KC cannot meet the standards required using exceptions (WAC 173-221-020)? What pollutants and their quantity will DOE be allowing KC to drain into LBC?

Response #3e
The above-question references WAC 173-221-020 which includes the antidegradation policy, Overriding Public Interest, and AKART. The permits issued by Ecology contain the requirement that any discharges to LBC, or any other surface water body must comply with the *Water Quality Standards for Surface Waters of the State of Washington*, Chapter 173-201A WAC and the state antidegradation

rule, WAC 173-201A-070, which includes the requirements for Overriding Public Interest and AKART. The antidegradation policy rule requires that the concentration of pollutants in any discharge must not be higher than the concentration of the same pollutants in the surface water receptor to which it discharges. To assure compliance with this rule, stormwater runoff will be captured in detention ponds, treated, and monitored for pertinent contaminants, and the dewatering water will be oxygenated and tested for applicable contaminants, prior to discharging to any surface water receptor.

Comment #3f
Will DOE require that KC use infiltration rather than full discharge to LBC?

Response #3f
No, Ecology has provided the option to King County to discharge stormwater and dewatering waters to either LBC or groundwater via soil infiltration. The issue of groundwater discharge to LBC was discussed with the Washington State Department of Fish & Wildlife and their staff did not express concern with the level of groundwater discharges on the order of 1 cfs to LBC that are expected during the project.

Comment #3g
Will DOE be monitoring the groundwater withdrawals and the water depths of public and private water supplies in this area? The people in this area are provided water from Alderwood as well as public and private wells in the Cross Valley Sole Source Aquifer. DOE must be concerned with water quality of groundwater and where it is going and how (WAC 173-200).

Response #3g
The Department of Ecology will not be monitoring the ground water withdrawals and water depths of supply wells in the area. In the unanticipated event that a nearby well owner is impacted by the construction, we would expect the well owner to contact Ecology. King County's operations can not adversely affect a water right. If impairment should occur, King County has a contingency plan to supply water if nearby supply wells are adversely affected.

Regarding the Cross Valley Aquifer, the Brightwater site is located on the very edge of the aquifer, down gradient from all of Cross Valley Water District's wells. Ecology's review of the FEIS and other information affirms that the water level at the site would have to be drawn down much deeper than anticipated to impact the nearest Cross Valley Water District well.

Comment #3h
Will DOE notify purveyors and individual owners of dropping of water supply so that King County or other withdrawal institutions can make arrangements for water supplies?

Response #3h
This comment is out of scope for this permit. King County will contact potentially affected purveyors as well as private well owners for well monitoring during construction. If disruptions in service occur, they will supply water at their expense.

Comment #3i
Has KC followed acceptable measures under WAC 173-173 for groundwater monitoring in its dewatering process? King County reported minimum and maximum discharge rates which differ by cfs and gpm depending on which document you read. Is there a standard set of volume rates that should

be used, rather than confusing the public by interchanging volumes? The average withdrawal of groundwater per day was higher in the NPDES permit than in the FEIS.

Response #3i
This comment is out of scope for this permit. Nonetheless, Ecology has provided the following response. The purpose of chapter 173-173 WAC is to establish standards of acceptability for measuring devices (meters) and requirements for recording and reporting water use (water rights). It does not require monitoring of ground water. There are no metering requirements for construction dewatering.

Comment #3j
How many wells in the local area use the upper aquifers associated with this stream valley? How will these wells be impacted by dewatering of the first shallow layer of groundwater?

Response #3j
Out of Scope for this construction stormwater NPDES permit. King County presented information regarding nearby wells in the FEIS. Based on the depth and geology of the proposed tunnel, they anticipate declines in the shallow (Qva) aquifer to be less than 1 foot. King County is aware that if they impact a party's well they could be held responsible.

Comment #3k
How is DOE protecting and managing the aquifers in this multiple aquifer system as required by WAC 173-154-020? The highest and best use of this water according to DOE regulations is not withdrawal, but leaving the water as is for spring and stream flows. Please explain how KC's withdrawal runs counter to DOE's mission to preserve upper level aquifers.

Response #3k
This comment is out of scope for this permit. Chapter 173-154 WAC was promulgated as guidance for permitting decisions, meaning for a long-term, perpetual water right. WAC 173-154-090 states, "The provisions of this chapter shall apply to all ground water rights under state jurisdiction…" The proposal by King County is for construction dewatering, which does not require a water right. Chapter 173-154 WAC does not give Ecology authority to regulate construction dewatering. We have offered strong recommendations for King County to perform their construction with minimal impacts to streams and nearby wells/water rights, and we warned them of possible third-party civil suits if water rights are impaired.

Comment #3l
Where is the basin assessment used for water rights in the LBC basin (WAC 173-152-040)?

Response #3l
Out of Scope for this Permit. A watershed assessment entitled, "Draft Initial Watershed Assessment, Water Resources Inventory Area 8, Cedar-Sammamish Watershed" was completed in 1995. This assessment was crafted to aid in making permitting decisions. Ecology has a copy of this assessment in the Water Resources Section for public review. Please contact either Sally Perkins at (425) 649-7190, Public Disclosure Coordinator, or Jay Cook, Water Resources Program, jcoo461@ecy.wa.gov , (425) 649-7186.

Comment #3m
What are the guidelines, criteria and procedures for designation of ground water management areas and is there one for the LBC basin (WAC 173-100-010)?

Response #3m
Out of Scope for this Permit. A ground water management area (GWMA) is a specific geographic area which encloses one or more aquifers and in which there exists a justifiable concern for the quality and/or quantity of that ground water. The purpose of designating a ground management area is to: 1) Protect quality and quantity of ground water; 2) Meet future water needs while recognizing existing water rights; and 3) Provide for effective and coordinated management of the ground water resource.

The guidelines, criteria and procedures for designation are outlined within chapter 173-100 WAC. A hard copy of a 1986 publication entitled "Guidelines for Development of Ground Water Management Areas and Programs (Chapter 173-100 WAC)" is available for review. Please contact either Sally Perkins at (425)-649-7190, Public Disclosure Coordinator, or Jay Cook, Water Resources Program, jcoo461@ecy.wa.gov , (425) 649-7186.

Little Bear Creek is covered by the one GWMA in Snohomish County. The person to contact regarding this is Jalyn Cummings, Principal Groundwater Planner, Snohomish County Public Works, jalyn.cummings@co.snohomish.wa.us, (425) 388-3187.

Comment #3n
"How can groundwater in this area be maintained for future use, if KC is permitted to flush it away?"

Response #3n
Groundwater that is withdrawn for construction dewatering or underdrain dewatering will either be discharged to LBC or back to the groundwater via soil infiltration. All dewatering waters will be kept within the Lake Washington drainage basin. This is consistent with information contained in the FEIS.

Comment #4
"Thank you for the opportunity to review the draft NPDES permit for the construction phase of the Brightwater Treatment Plant. I have one comment concerning the requirement to monitor phosphorous within 24 hours of every 1/4 inch rainfall event, not to exceed 3 times per week. As phosphorous does not have an effluent limitation as noted on page 7 of 29 of draft permit, we are requesting that we sample it in the same manner as the other constituents without effluent limitations in that samples shall be collected from the first three storm events greater than .25 inches, then at least one sample per quarter from a storm event greater than .25 inches."

Response #4
The stormwater monitoring of phosphorus for discharges to surface waters is being required for characterization purposes. The above-request is granted and the permit has been changed to include phosphorous monitoring for the first three storm events greater than 0.25 inches, and then at least one sample per quarter for a storm event greater than 0.25 inches.

General Ecology Note: Some comments were received during the public comment period stating that Ecology should not issue the two construction stormwater NPDES permits (one for the conveyance system and one for the wastewater treatment plant) until King County has issued either an Addendum or a Supplemental Environmental Impact Statement (SEIS) regarding the seismic fault on the Route 9 site. These comments were made in relation to the King County Hearing Examiner's decision on the

appeal of the Final Environmental Impact Statement (FEIS) by the Sno-King Environmental Alliance. Initially, Ecology was going to wait until either an SEIS or an Addendum was issued before the construction stormwater NPDES permits were issued. After legal consultation and further review of the nature and extent of the permits in relation to the Hearing Examiner's decision, Ecology has decided that it is appropriate to issue the above-named permits prior to the County issuing the Supplemental EIS or Addendum related to the seismic fault.

In regard to this wastewater treatment plant (WWTP) construction stormwater NPDES permit, the Hearing Examiner's decision was based on the idea that the locations of permanent facilities, structures or buildings should not be prescribed until the seismic trench has been dug, investigated, and analyzed and an SEIS or an Addendum is issued to account for the fault and to discuss the adverse environmental impacts from this fault. The construction stormwater NPDES permits are water quality permits that regulate the stormwater runoff from a construction site and the effects of dewatering waters (i.e. pumped groundwater) on surface waters and groundwaters. The permits bear no relation to the types and locations of permanent structures on the Route 9 site nor do they describe the locations of temporary, construction stormwater settling ponds used for treatment. The construction stormwater permits set conditions to ensure that stormwater runoff and dewatering waters from the construction site does not cause harm to Little Bear Creek or underlying groundwaters. The terms and conditions of the permits apply to the term of the construction phase only and are applicable whether or not a fault exists and whether or not a fault is active or an event occurs.

Summary of Permit Changes

NOTE: Only minor changes to the proposed construction stormwater NPDES permit for the WWTP were necessary to develop the final permit. The following represent changes to the draft permit:

1. The stormwater monitoring frequency requirement for phosphorus when discharging to surface water has been changed from every ¼-inch rainfall event, not exceed 3 times per week to monitoring the first 3 storm events greater than 0.25 inches and then at least one sample per quarter from a storm event greater than or equal to 0.25 inches. The phosphorus monitoring requirement was intended for characterization purposes only and does not have an effluent limitation.

2. A Departmental review during the comment period indicated that the monitoring requirements for stormwater and dewatering waters of priority pollutant metals, volatile organic compounds, polynuclear aromatic compounds, and PCBs and the issue of water quality exceedances should be clarified for footnotes 4 and 11 of the Monitoring Schedule, Table C.1. The following revision for footnote 4 is as follows (underlining indicates new language).

   "If there are no water quality exceedances after two years from the date of initial sampling event, then those compound(s) can be eliminated from further sampling. <u>If water quality exceedances occur, comply with Section S.4.E. If the results are valid, then an increase in frequency of sampling for the parameter(s) of concern shall occur at a rate of two samples per month for a storm event equal to or greater than 0.25 inches, until compliance can be achieved. Thereafter, sampling shall resume quarterly for a period of two years for the previously-noted parameter(s) of concern."</u>

Similarly, the following revision for footnote 11 is as follows (underlining indicates new language):

"If there are no water quality exceedances after the second year of sampling, then those compound(s) can be eliminated from further monitoring. <u>If water quality exceedances occur, comply with Section S.4.E. If the results are valid, an increase in frequency of sampling for the parameter(s) of concern shall occur at a rate of two samples per month for a storm event equal to or greater than 0.25 inches, until compliance can be achieved. Thereafter, sampling shall resume quarterly for a period of two years for the previously-noted parameter(s) of concern.</u>"

3. A departmental review of the monitoring schedule (Section S3.C.1) has resulted in a revision to the sampling point for the hardness parameter. The sample points have been revised from the point of discharge in the receiving water and upstream and downstream of the point of discharge in the receiving water to a single sampling point in the receiving water. Only the hardness of the receiving water is necessary to calculate water quality compliance with the metals criteria.

4. A departmental review of the draft permit has revealed that clarification is necessary regarding the submission of the priority pollutant analyses and the DMRs. Section S4.A has been revised to indicate that the priority pollutant analyses shall be submitted to Ecology as a separate report and that these priority pollutants will not be indicated on the DMR forms. Also, the use of a summary DMR form has been included in addition to the detailed DMR forms.

5. Clarification was provided in this fact sheet regarding the state's water quality standards. The state adopted new water quality standards in the year 2003. However, the USEPA has to grant approval of the state's new standards. At the time of this permit issuance, USEPA has not approved the newly adopted water quality standards in their entirety. Therefore, the permit contains information on the previous and newly adopted state water quality standards.